

CLAIMS

1-20. Cancelled.

21. (Previously presented) A system that monitors physiological states, comprising:
a power supply;
a resonant circuit that induces an oscillating magnetic field in response to receiving energy from the power supply and that provides a signal characteristic of a power loss of the resonant circuit due to a volume of interest of a human subject in the magnetic field where the resonant circuit does not surround any perimeter of the human subject; and
a detector that detects the signal, wherein the signal is used to monitor a physiological state of the human subject.
22. (Previously presented) The system of claim 21, wherein the entire resonant circuit resides within a sub-portion of a front side of clothes worn by the subject.
23. (Previously presented) The system of claim 21, the resonant circuit, comprising:
a coil having conductors, wherein the resonant circuit is integrated into an insulating fabric carrier and the conductors are interwoven with threads of the insulating fabric carrier.
24. (Previously presented) The system of claim 21, wherein the resonant circuit is integrated into a bandage configured to be affixed to the human subject.
25. (Previously presented) The system of claim 21, further comprising:
a second resonant circuit that induces a magnetic field in a reference volume of the subject and that provides a second signal characteristic a state of the reference volume.
26. (Previously presented) The system of claim 25, wherein the volume of interest is an extremity of interest of the human subject and the reference volume is a known healthy complementary extremity of the human subject, and a comparison of the signal and the second signal is used to monitor a health of the extremity of interest relative to the reference extremity.

27. (Previously presented) The system of claim 21, wherein the signal is characteristic of blood flow of the human subject.
28. (Previously presented) The system of claim 21, wherein the signal is characteristic of edema.
29. (Previously presented) The system of claim 21, wherein the volume of interest is a human heart.
30. (Previously presented) The system of claim 21, wherein the signal is characteristic of a respiration rate of the human subject.
31. (Previously presented) The system of claim 21, wherein the resonant circuit is integrated into clothing worn by the subject.
32. (Previously presented) The system of claim 21, wherein the resonant circuit is integrated into a bed sheet.
33. (Previously presented) The system of claim 21, wherein the resonant circuit is integrated into furniture.
34. (Previously presented) The system of claim 21, further comprising: an alarm that generates an alarm signal based on the detected signal.
35. (Previously presented) A method for monitoring physiological states, comprising:
placing a resonant circuit near a volume of interest of a human subject so that a magnetic field produced by the resonant circuit induces an electric field in the volume of interest, wherein the resonant circuit is located only on a front side of the subject;

detecting a signal produced by the resonant circuit, wherein the signal is characteristic of a power loss of the resonant circuit due to the volume of interest; and
using the detected signal to determine a physiological state of the subject.

36. (Previously presented) The method of claim 35, wherein the resonant circuit is part of clothing worn by the subject.

37. (Previously presented) The method of claim 35, wherein conductors of the resonant circuit are interwoven with threads of an insulating fabric carrier worn by the subject.

38. (Previously presented) The method of claim 35, wherein the resonant circuit is integrated into a bandage worn by the human subject.

39. (Previously presented) The method of claim 35, further comprising:
comparing the signal with a second signal characteristic of a normal state of the subject;
and
using a result of the comparison to identify an abnormal state of the subject.

40. (Previously presented) A method, comprising: determining a physiological state of a heart of a human based on a signal generated by a resonant circuit that induces a magnetic field in the heart, wherein the resonant circuit is located only on a chest of the human and proximate to the heart.